



## Ship Pollution Regulations

Regulations to prevent pollution from ships in Australian waters are implemented by both Commonwealth and State/Northern Territory (NT) governments. They are based on the International Convention for the Prevention of Pollution from Ships, known as MARPOL. This Convention is in force in 154 countries and is the main international convention for the prevention of ship-sourced pollution in the marine environment.

MARPOL is administered by the International Maritime Organization (IMO), a specialised agency of the United Nations, which has adopted more than 50 Conventions and Protocols relating to ship safety and marine environment protection.

MARPOL addresses pollution that might result from accidents such as collisions or groundings, as well as all types of waste generated during the normal operation of a ship. Ships are permitted to discharge small quantities of certain wastes, subject to very strict controls.

The technical requirements of MARPOL are contained in its six annexes:

- Annex I Oil
- Annex II Noxious Liquid Substances in Bulk (NLS)
- Annex III Harmful Substances in Packaged Form
- Annex IV Sewage
- Annex V Garbage
- Annex VI Air Pollution

MARPOL also includes special protection measures for Australia's Great Barrier Reef and part of the Torres Strait region. The MARPOL 'nearest land' definition for this area and supporting chartlets can be found at: [www.amsa.gov.au/environment/regulations/maritime-discharges/nearest-land/index.asp](http://www.amsa.gov.au/environment/regulations/maritime-discharges/nearest-land/index.asp)

### Information on standards and requirements for shipping

The following is a general overview of MARPOL requirements.

#### Annex I- Oil

The regulations for the prevention of pollution by oil require certain ships to have specific pollution prevention equipment on board to manage any discharges into the sea.

This equipment includes oily water separators fitted with oil content meters that filter oily mixtures and monitor the level of oil in waste water while being discharged from a ship. If permitted oil content levels are exceeded, an alarm is triggered and the discharge is shut down. The permitted level is generally 15 parts per million oil in water - a concentration at which oil is not normally visible. Ships are also required have emergency response plans, to undergo regular surveys to ensure all equipment is functional, and to maintain an oil record book with details of all discharges and oil pumping operations.

For oil tankers, there are additional regulations that require these ships to have double hulls and protective location of ballast tanks to minimise loss of oil in the event of an accident.

#### Annex II- Noxious Liquid Substances

The regulations for the control of pollution by noxious liquid substances (NLS) include provisions for the design and construction of chemical tankers, including specific requirements for loading, carriage and discharge of NLS cargoes. These regulations also address the treatment of noxious liquid cargo residues remaining on board, the washing of empty cargo tanks and the final disposal of contaminated tank wash water.

Chemical tankers are also required to have emergency response plans, undergo regular surveys to ensure the ship and equipment is in good condition, and maintain a cargo record book with details of relevant operations such as cargo loading/unloading, tank cleaning and discharge of tank washings.

## **Annex III- Harmful Substances in Packaged Form**

The regulations for the prevention of pollution by harmful substances in packaged form contain requirements on packing, marking, labelling, documentation, stowage and quantity limitations on harmful substances carried in forms of containment such as freight containers and portable tanks.

## **Annex IV- Sewage**

The sewage regulations prohibit the discharge of sewage into the sea, except when the ship has in operation an approved sewage treatment plant; is discharging comminuted (or macerated) and disinfected sewage at a distance of more than three nautical miles from the nearest land; or is discharging untreated sewage from a holding tank at a prescribed rate and at a distance of more than 12 nautical miles from the nearest land. The sewage regulations also include standards for discharge connections to facilitate the disposal of sewage from ship to shore.

## **Annex V- Garbage**

The regulations for the prevention of pollution by garbage prohibit the disposal of all garbage at sea, with only limited exceptions for the discharge of specific types of waste, such as food waste, providing the vessel is at least a specified distance from the nearest land. Ships of a certain size are also required to carry and implement detailed garbage management plans, maintain garbage record books, and display placards to notify the crew and passengers of the applicable requirements. Lost or abandoned fishing gear must be recorded and reported to minimise navigational and environmental hazards.

## **Annex VI- Air Pollution**

The air pollution regulations include provisions to progressively reduce emissions of nitrogen oxides (NO<sub>x</sub>), sulphur dioxide (SO<sub>x</sub>) and particulate matter from ships. Emissions of SO<sub>x</sub> and NO<sub>x</sub> are controlled through limits on the sulphur content of marine fuel oil and performance standards for marine diesel engines, respectively. More stringent standards for SO<sub>x</sub> and NO<sub>x</sub> emissions are established in designated Emission Control Areas (ECAs).

These regulations also aim to enhance the energy efficiency of shipping and reduce greenhouse gas (GHG) emissions, including through Energy Efficiency Design indexing for new ships and Ship Energy Efficiency Management Plans. These measures are designed to improve efficiency and reduce emissions over time.

This Annex also prohibits the deliberate emissions of ozone depleting substances; provides technical standards for shipboard incinerators; and includes regulations for fuel oil quality standards and fuel oil suppliers.

## **Role of Government**

AMSA is responsible for the application and enforcement of MARPOL in areas of Commonwealth jurisdiction, that is, to the limit of the 200 nautical mile exclusive economic zone.

Where State/NT governments give effect to MARPOL Annexes, they are responsible for coastal waters up to three nautical miles (approximately 5.5 kms) from land. The Great Barrier Reef Marine Park Authority (GBRMPA) is responsible for enforcement of illegal discharges from smaller vessels in the Great Barrier Reef Marine Park.

In addition to placing obligations on ships, MARPOL places an obligation on Governments to ensure that waste reception facilities are available in all ports and terminals, which are adequate to receive all wastes generated on board a ship during normal operation as a result of the ship's compliance with MARPOL. These facilities can be fixed, such as those normally found at oil terminals to receive tank washing from oil tankers, or mobile, such as trucks, road tankers or barges operated by private waste management contractors.

## **Compliance and Enforcement**

AMSA conducts an extensive program of inspecting ships visiting Australian ports to ensure compliance with the relevant international shipping conventions, a program known as port State control (PSC). During 2015, AMSA marine surveyors conducted 4,050 PSC inspections and detained 242 ships to ensure serious deficiencies, including those related to pollution prevention equipment, were rectified.

MARPOL legislation administered by AMSA provides wide powers for AMSA marine surveyors to board ships and obtain evidence, such as oil samples and ship records, and enables ships to be detained while investigations are carried out.

Ships that are found to have discharged in contravention of MARPOL and Australian legislation, such as the *Protection of the Seas (Prevention of Pollution from Ships) Act 1983* are held accountable and, in addition to detention, may be subject to substantial penalties.

More than 200 investigations into the pollution of Australian waters by ships have been successfully prosecuted under Commonwealth and corresponding State/Northern Territory legislation implementing MARPOL. Details on these prosecutions are available on AMSA's website at the following link: [www.amsa.gov.au/environment/reporting-ship-sourced-pollution/prosecutions](http://www.amsa.gov.au/environment/reporting-ship-sourced-pollution/prosecutions).

AMSA also uses alternative compliance and enforcement options, such as issuing compliance directions, improvement notices, and educational information, in order to deter offenders from discharging wastes in Australian waters.

Suspected violations of the MARPOL regulations causing pollution or damage to the marine environment can be reported directly to AMSA. More information on reporting pollution incidents can be found at: [www.amsa.gov.au/environment/reporting-ship-sourced-pollution](http://www.amsa.gov.au/environment/reporting-ship-sourced-pollution).

### For more information

International Maritime Organization – [www.imo.org](http://www.imo.org)

Australian Maritime Safety Authority – [www.amsa.gov.au](http://www.amsa.gov.au)